tions: it is fair to estimate the cost of keeping each one at $2 per week, or $104 per year; to which should be added, for clothing, $28 per year, or a total cost of $132. These are the figures given in the report of the Perkins Institution, a Massachusetts asylum for the blind, in October, 1874. It must be remembered, however, that these individuals are not producers: they do not earn what they otherwise would; and this amount must be added to the cost. Taking the lowest estimate of a man's wages at $1.20 for each working day, supposing that not one among them all could become a skilled artisan, and counting the wages of the women at only 40 cents a working day, we find there is a total yearly loss to the community, cost and wages for each man, of $404, and for each woman of $256. This, at the very minimum estimate, amounted in New York, in 1880, to $1,682,136, and over $25,000,000 in 1888 for the entire United States.

If these statements are of as much importance as they would appear, it behooves us at least to inquire what steps can be taken for lessening the increase of blindness. In a paper like this it is possible only to refer briefly to points which are of primary importance, without attempting detail in any respect. At present, however, if we were to suggest a plan, it would be about as follows: —

First, To popularize with the profession and laity the necessity of some care as to the proper cleansing of the eyes of infants immediately after birth; to impress the importance of this matter upon nurses, hospital attendants, and others; and, if possible, to teach them to apply to every infant's eyes a suitable solution of nitrate of silver, which need never be stronger than two per cent, and of maximum quality.

Second, Enactments should be encouraged similar to that recently passed by the New York State Legislature in regard to the proper isolation and quarantining of children with suspicious diseases of the eyes in all residential schools and in large institutions in which children are brought together. Moreover, similar rules, with proper modifications, should be adopted in prisons, reformatories, and other institutions for adults. Especially does this hold good concerning soldiers in barracks, and sailors on shipboard.

Third, By educating the public. The laity should be cautioned as to the contagious character not only of the so-called granular lids, but especially of those severe forms of inflammation of the eye which result from inoculating it with gonorrhœal matter. This might be accomplished by posting notices in proper places, officially signed by the Board of Health or other proper officers. Other proper notices posted in stone-quarries, machine-shops, etc., would tend to lessen the proportion of accidents to eyes, so frequent in these places.

Fourth, That steps be taken to prevent the introduction into this country, by immigration, of cases of contagious diseases of the eye.

Fifth, That renewed efforts be made by the profession to collect data relating to bacteria affecting the eye, especially to the action of the gonococcus, the so-called trachoma coccus of Michel, and other forms of either the normal or diseased conjunctiva.

In submitting this report the committee is impressed with the fact that any such presentation of statistics and recommendations is entirely inadequate to give a proper idea of the importance of the subject. In order to condense the statement as much as possible, it has been necessary to omit certain phases of the question entirely. The distribution of blindness in different portions of the State; the relation of certain causes which produce it to altitude, to density of population, and other factors, — have been entirely omitted for the sake of brevity. The bacteriological questions which it involves have been hardly referred to, although considerable data have been accumulated relating to the causes of the disease here, by a personal examination of the same causes as they exist in Egypt, in Finland, and in other countries where blindness is of frequent occurrence. It is hoped, however, that these few facts, though imperfectly presented, may arouse some slight interest in the subject, and, in doing so, tend to lessen the number of those most unfortunate and most pitiable of human beings, the blind.

LUCIEN HOWE
E. V. STODDARD } *Committee.*
HENRY D. NOYES

BOOK-REVIEWS.

The New Eldorado; A Summer Journey to Alaska. By MATURIN M. BALLOU. New York, Houghton, Mifflin, & Co. 12°. $1.50.

MR. BALLOU, who has travelled extensively in various parts of the globe, here gives us an account of a recent trip across this continent and up the coast of southern Alaska. He is a close and cultivated observer, though not exactly of the scientific order, and his book is intended rather for popular than for learned readers. He tells his story well, except that he is sometimes too anxious to be picturesque, and occasionally falls into rhetorical exclamations that might better have been omitted. On his journey across the continent he tarried nowhere any length of time save in the Yellowstone National Park, where he spent ten days, and to which he devotes several chapters. The scenery that abounds there, however, is not easily described, and his book contains no pictures nor maps to supplement the work of the pen. Arrived on the Pacific coast, Mr. Ballou's party embarked on a steamer and sailed up the coast of Alaska, passing for the most part between the islands and the mainland. The northern parts of the territory were not visited, though the author gives some account of them taken from other authorities. Alaska has generally been supposed unfit for agricultural purposes; but Mr. Ballou assures us that all the southern part will grow any crops that will thrive on the Atlantic coast north of Chesapeake Bay. Still the agricultural resources of the region as a whole are admitted to be small; but its fisheries are well known as of great value, its timber abundant, and its mines of gold, iron, and coal, of special importance. All these resources are described at length by our author, as is also the scenery of the region he passed through. The native inhabitants, however, hardly correspond with the natural features of the country. Mr. Ballou says what good he can of them; but in laziness, filthiness, cruelty, and superstition they are like all barbarians the world over. The Eskimo live in the extreme north, while the natives of the region Mr. Ballou visited are similar to the Indian tribes of our older Territories, though superior in intelligence. Since the government has established a few schools among them, they have shown great eagerness to learn, and the increase of such schools is strongly advocated. Mr. Ballou complains that Congress has not done its duty by Alaska, and gives good reasons for this view, and he also thinks that the scientists have been backward in the work of exploration. On his part, he believes that the future of Alaska is bright with promise, and readers of his book will, to some extent at least, share his views.

Elementary Lessons in Heat. By S. E. TILLMAN. Philadelphia, Lippincott. 8°. $1.80.

THE author is professor of chemistry at the United States Military Academy, and prepared these lessons for use at West Point in a short course on heat. The character of the matter presented was determined to some extent by the peculiarities of the course of study at the academy; but the main point sought was to give the information most likely to be needed, and to give it without overloading with details of apparatus and methods of investigation. After a number of chapters on the elementary principles of heat, there follow several on thermodynamics, — not treated mathematically, — and the influences of heat and cold on meteorological phenomena.

Our Cats and all about Them. By HARRISON WEIR. Boston and New York, Houghton, Mifflin, & Co. 12°. $2.

MR. WEIR is president of the National Cat Club of England; but before he was that, and before the club existed, he was the originator of the cat-show at the Crystal Palace, held in the summer of 1871.

What they talk of at the Cat Club we may believe to be the "points" of their pets, and the latest trick or show of wisdom in door-opening or wandering home of these same pets. This is what the book tells of. It is a gossipy book, full of stories of the doings of cats, sprinkled with descriptions of the innumerable kinds, with an account of their diseases, and ending with several chapters on trained cats, and cats that have learned to fish.

The author confesses to having been won over to a love for cats

from having been their hater, and writes this book that others may see the cat in all its possibilities as a useful, attractive, and affectionate domestic animal.

At the present time, when the power cats possess of finding their way home over supposed to be unknown roads is receiving some discussion, it is interesting to note that at a race of this kind held near Liege, Belgium, in 1860, the winner was a blind cat.

But it is not alone of cats as cats that our author tells us: he gives us also a glossary of terms of which the word "cat" forms a part. In fact, "Our Cats and all about Them" is a title well borne out by the contents, so far as such information as the ordinary reader is likely to seek is concerned.

A Treatise on Ordinary and Partial Differential Equations. By WILLIAM WOOLSEY JOHNSON. New York, Wiley. 8°. $3.50.

THIS treatise on differential equations is in continuation of the series of mathematical text-books, by the same author, of which have already appeared the differential and integral calculus. Professor Johnson is professor of mathematics at the United States Naval Academy at Annapolis, and it may be that some will trace in the book methods which are said to be characteristic of the United States Army and Navy mathematics; but it must be said that the plan pursued is likely to lead to a clearer understanding by the student. The object is to give a knowledge of the subject, so far as it is likely to have practical application; and in this it is safe to say that Professor Johnson has succeeded.

A Graduated Course of Natural Science, Experimental and Theoretical, for Schools and Colleges. Part I. By BENJAMIN LOEWY. London and New York, Macmillan. 12°. 60 cents.

THOSE who are trying to introduce sane methods of science-teaching into our schools, will find in Mr. Loewy's little book much that is suggestive and of value. Mr. Loewy was at one time the science master in the recently discontinued International College just out of London, and has had twenty years of experience in teaching physics and chemistry to large classes, both in the lecture-room and in the laboratory. In this first part of his series he confines himself to the physical phenomena which arise on account of the mutual attraction of particles of matter, but he has limited himself to those interactions of matter that his experience shows him to be really intelligible to young beginners. This sketch of the author's purpose may be misleading, as the following summation of some of the chapter-heads will show: "Pressure in Liquids," "Filtration," "Cause of Winds," "Hard and Soft Water," "Action of Animals and Plants on Air," etc.

AMONG THE PUBLISHERS.

THE Longmans will publish shortly two volumes of American short stories, — "Gerald French's Friends," tales of California Irishmen, by George H. Jessop; and "A Family Tree and Other Stories," by Brander Matthews.

— The October number (No. 43) of the Riverside Literature Series (published quarterly during the school year 1889-90 at 15 cents a number, by Houghton, Mifflin, & Co., Boston) contains the "Story of Ulysses among the Phæacians," from William Cullen Bryant's "Translation of Homer's Odyssey." This selection, which has been described by one of our most famous Greek scholars as the finest and at the same time simplest bit of imaginative writing in all Greek literature, is a complete story in itself. It tells of Ulysses' discovery by Nausicaä, the daughter of King Alcinoüs, his reception by the king, the festivals given in his honor, his song of the Trojan Horse and the Fall of Troy, and his departure for his home in Ithaca, and gives a most excellent picture of the life, manners, and customs of the ancient Greeks. This number of the Riverside Literature Series will be found of especial value for use in schools. It is rarely possible to make a selection from a great poem like the "Odyssey" at once so complete in itself, so fascinating, and so instructive, as is this "Story of the Adventures of Ulysses among the Phæacians."